



KSC FITNESS CENTER

Latest news and bulletin updates

Monday,
May 5, 2025

Ashley Cowart, Wellness Specialist

Kris Schweitzer, Wellness Specialist

Understanding the Cruel Mystery of Lupus



Most are probably unaware that May is Lupus Awareness Month. Many more likely know very little about what lupus is.

What is lupus?

Lupus is a chronic autoimmune disease where a person’s immune system, instead of protecting the body, mistakenly attacks healthy tissues, causing inflammation and damage in various organs and systems, including joints, skin, blood cells, kidneys, lungs, the heart, and the brain. The most common form of lupus is Systemic Lupus Erythematosus, or SLE, and is the type that 7 in 10 people with lupus have. SLE is what most people mean when they refer to “lupus,” and is the focus of this article.

Picture Description: A purple ribbon forms the body of a butterfly with world maps on its wings, symbolizing global unity for World Lupus Day on May 10, promoting awareness for lupus.

What causes SLE?

The cause of SLE in most cases is unknown. It is likely that lupus results from a combination of one’s genetics and environment. It appears that people with an inherited predisposition for lupus may develop the disease when they come into contact with something in the environment that can trigger lupus. Some potential triggers include:

- Sunlight
- Infections
- Medications

Who is at risk for developing SLE?

Anyone can get lupus, but some people at higher risk includes:

- Women ages 15 to 44 (90%)
- African American people, Hispanic/Latino people, American Indian/Alaska Native people, and Asian Americans and Pacific Islanders
- People who have a family member with lupus or other autoimmune diseases

What are the symptoms of SLE?

Lupus, one of several diseases known as “the great imitator,” can be difficult to diagnose because its signs and symptoms often mimic those of other illnesses and disorders. The most common symptoms of SLE include:

- Skin rashes
- Pain or swelling in the joints (arthritis)
- Swelling in the feet and around the eyes
- Extreme fatigue
- Low fevers

What are possible complications of SLE?

Because lupus can affect so many different areas and systems of the body, it can cause many different types of complications. Some of the more serious complications include:

- High fevers, seizures, and behavior changes
- Rashes, sores, and ulcers
- Heart attack
- Stroke
- Renal (kidney) failure

Why is awareness important?

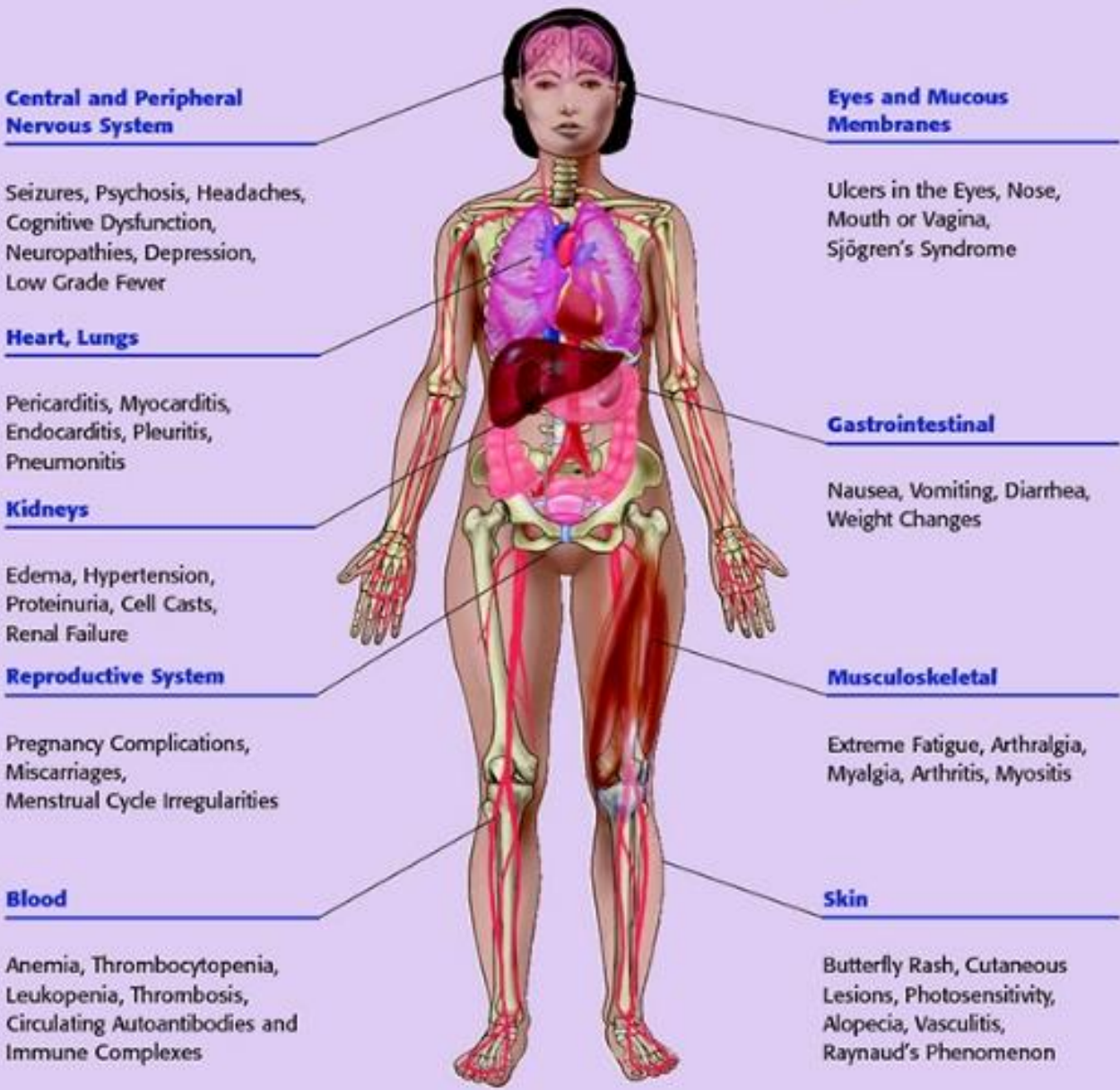
Lupus is often misunderstood and underdiagnosed, leading to delays in care. There is currently no cure for lupus, but early diagnosis and treatments can help control it. Increasing awareness helps ensure earlier diagnoses, better treatment options, and more support for those living with the disease.

Organizations like the Lupus Foundation of America (LFA) work tirelessly to greatly accelerate lupus research and push scientific boundaries to improve life now for people living with lupus. The mission of the LFA is ‘to improve the quality of life for all people affected by lupus through programs of research, education, support and advocacy,’ and to ‘end the brutal impact of lupus.’

Picture Description: A purple ribbon graphic promotes Lupus Awareness Month in May, encouraging people to "Wear Purple and Be Visible for an Invisible Disease," symbolizing support for those affected by lupus.



The Impact of Lupus on the Body



Lupus can affect any part of the body; however, most people experience symptoms in only a few organs.

- Lupus is an incurable chronic autoimmune disease that causes inflammation in various parts of the body. The disease can range from mild to life-threatening.
- The cause of lupus is unknown. Scientists believe that individuals are genetically predisposed to lupus, and that environmental factors “trigger” the symptoms.
- 90% of people with lupus are women, 80% of them developed lupus between ages 15 and 45.
- With proper treatment, most people with lupus can live a normal life span.

Picture Description: An informative infographic titled "The Impact of Lupus on the Body" shows how lupus affects various organs, including the skin, joints, kidneys, and nervous system, with labeled symptoms and key facts to raise awareness.

References:

Centers for Disease Control and Prevention. (2023, May 9). *Lupus*. U.S. Department of Health and Human Services. <https://www.cdc.gov/lupus/index.htm>
Lupus Foundation of America. (n.d.). *About us*. <https://www.lupus.org/about-us>
Lupus Foundation of America. (n.d.). *Lupus symptom checklist*. <https://www.lupus.org/resources/lupus-symptom-checklist>
Mayo Clinic Staff. (2023). *Lupus*. Mayo Clinic. <https://www.mayoclinic.org/diseases-conditions/lupus/symptoms-causes/syc-20365789>

Memorial Day Closure Notice

In observance of **Memorial Day**, the KSC Fitness Center will be closed on Monday, May 26, 2025.

We encourage you to take time to honor and remember those who have made the ultimate sacrifice in service to our country. Whether you spend the day with loved ones or in reflection, we invite you to consider participating in a meaningful fitness tradition.

Check out the Murph Challenge below—a powerful way to pay tribute through movement and resilience.

Picture Description: A Memorial Day graphic features the message "Remember and Honor" over a waving American flag, paying tribute to fallen U.S. military service members.



Colin Andryc, Fitness Specialist

Creatine: The Most Researched Supplement You're Probably Overlooking



If I told you there is a supplement that has been used for decades, is heavily researched, improves lean muscle mass, heart function, and cognitive capabilities, you would think, “it probably costs an entire paycheck and I’ll need to visit my doctor to get a prescription for this mysterious substance.” Or perhaps, “I would need to eat an entire underwater farm of kelp, take 50 scoops of whey protein, consume 30 ounces of red meat in one sitting? No, no, and no! Enter creatine: a simple, affordable powerhouse that's been sitting quietly on the supplement shelf, ready to transform your performance in and out of the gym, mentally and physically.

Supplementation

While the science of supplementation is fascinating, can cover multiple newsletters. Supplementing with creatine is very popular amongst athletes and exercising individuals for improving muscle mass, performance, and recovery. Getting back to basics, creatine can be formed in the body (endogenously) or

consumed through normal amounts of red meat or supplementation (exogenously). It boosts energy production in the muscles during high-intensity activities, helping improve strength, endurance, and overall physical performance. Creatine works by increasing the availability of phosphocreatine in your muscles, which serves as a rapid reserve of high-energy phosphate groups used to regenerate adenosine triphosphate (ATP) your body's primary energy currency, during short bursts of intense physical activity.

Picture Description: A fitness-themed flat-lay features blue dumbbells, a yellow measuring tape, and creatine powder with the word "CREATINE" written in it, symbolizing muscle-building and workout supplementation.

Dosing Strategies

- Some confusion lies in dosages and the timing of these dosages. There have been conflicting reports whether a ‘loading’ phase is necessary for oversaturating the muscles with a copious amount of creatine or where a smaller daily dose would just be as beneficial. The beauty lies within the choice itself, both options work and have been heavily studied. The reasoning behind the ‘loading’ phase is straightforward—for one week we oversaturate the muscles with a moderate dose of creatine (4x5g or 0.3g/kg/day) throughout the day. This ensures our creatine stores in our muscle are at maximum capacity and when energy is needed (quick burst of increased physical activity), the muscles will convert that phosphocreatine to the needed ATP to perform the work at hand. Some people do experience gastrointestinal issues with this higher dose but taking 4 servings of 5 grams spread out through the day is a good way to mitigate these intestinal issues instead of 1 serving of 20 grams.
- On the other hand, the maintenance phase requires us to ingest ~5g daily with no protocol calling for oversaturating the muscles with multiple doses. Lower daily creatine supplementation dosing strategies (3-5 g/day) are well established throughout the scientific literature for increasing intramuscular creatine stores leading to greater improvements in muscle mass, performance and recovery compared to placebo. While effective, this non-loading creatine supplementation dosing strategies delay maximum intramuscular creatine storage. For example, in the classic ‘loading’ vs. daily ‘maintenance’ dose comparison, creatine accumulation in muscle was similar (~ 20% increase) after participants consumed 3g/day for 28 days or 20g/day for 6 days. This smaller dosage will still saturate the muscles with creatine albeit at a gradual pace compared to the loading phase.

Forms of Creatine

- Now that we understand the dosing, we can focus on the delivery methods of creatine. While powder form is the most common, pills and gummies also exist and are beneficial for those that cannot tolerate creatine mixed into a beverage or want a quick serving without needing affordability, and safety, it is not hard to understand why it is so popular. A refined version of creatine monohydrate, micronized creatine is also popular in the supplement market. While chemically identical to monohydrate, it is processed into smaller particles which helps with solubility in water and absorption in the body. Ideal for those who have gastrointestinal issues from

Health Applications Beyond Fitness

- There is evidence from animal models that creatine supplementation is neuroprotective and can reduce the severity of spinal cord injury, cerebral ischemia, and concussion/traumatic brain injury. This evidence was so compelling that the International Society of Sports Nutrition recommended that athletes engaged in sports that have a potential for concussion and/or spinal cord injury take creatine for its neuroprotective effects. Thus, there are several reasons beyond the ergogenic (physical activity) benefit that all types of athletes may benefit.
- Creatine supplementation has been shown to improve cognitive performance, particularly in tasks requiring short-term memory and reasoning, especially in individuals under mental fatigue or with low dietary creatine intake. It may help older adults and vegetarians, who often have lower natural creatine levels, by enhancing brain energy metabolism and potentially reducing mental fatigue. Creatine may support heart health by improving energy metabolism in heart cells, which could be beneficial for individuals with heart failure or other cardiac conditions. While creatine shows promise in improving heart function, more research is needed to confirm its effectiveness as a treatment for heart-related issues.

Myths & Misconceptions

- This is becoming a long article, so we will just list the myths about creatine supplementation. Creatine is/does not: cause kidney damage, male baldness, an anabolic steroid, only for males, dehydration, harmful for children, increase fat mass. Once again all of those are myths and have been researched to be incorrect. While there is some evidence to suggest that creatine supplementation increases water retention, primarily attributed to increases in intracellular volume, over the short term, there are several other studies suggesting it does not alter total body water (intra or extracellular) relative to muscle mass over longer periods of time. As a result, creatine supplementation may not lead to water retention.

What does Colin think about creatine?

I am a sucker for a good deal and creatine is very affordable. On Amazon, you can get one kilo of micronized creatine for under \$30 which is good for 200 servings. I have gone through periods of my lifting life where I did not take any and while it may not seem like a big number at first, for me personally, I've noticed around a 5-10% difference in my big 3 lifts when I'm on creatine versus off it, though individual results may vary. I add about 5-7 grams in my post workout shake. The timing of your creatine is not as important as being sure to take it consistently; there are plenty of pre-workout mixes that have creatine as an ingredient.

I am not a fan of mixing creatine with just water, this can make me feel nauseous, so the flavored protein in my shake, plus the blueberries and oats I add do a good job of masking the taste. I find the taste of just water and creatine to be almost a copper/metallic taste. In a pinch, I will use orange or grape juice, Gatorade works well too. I have not performed a loading phase in quite some time and maybe overdue for one for variability’s sake (**this is my own idea and thought, there is no need to cycle on and off creatine**). At the end of my current cutting phase, I may take 2 weeks off ingesting creatine and start back up with a loading phase for my maintenance phase.

We hope you enjoyed this brief article on creatine! Always consult with a doctor before starting a new supplement. If you do decide to use creatine, take note on how it affects your body. Just because it is heavily researched, a physician may have a reason for you not to take it.



Picture Description: A fit young man in a sleeveless shirt smiles and points at a large supplement container while standing in a store aisle lined with various workout supplements.

References:

Buford, T. W., Kreider, R. B., Stout, J. R., Greenwood, M., Campbell, B., Spano, M., ... & Antonio, J. (2007). International Society of Sports Nutrition position stand: Safety and efficacy of creatine supplementation in exercise, sport, and medicine. *Journal of the International Society of Sports Nutrition*, 4(1), 6. <https://doi.org/10.1186/1550-2783-4-6>

Kreider, R. B., Kalman, D. S., Antonio, J., Ziegenfuss, T. N., Wildman, R., Collins, R., & Lopez, H. L. (2017). Common questions and misconceptions about creatine supplementation: What does the scientific evidence really show? *Journal of the International Society of Sports Nutrition*, 14, 18. <https://doi.org/10.1186/s12970-017-0173-z>

Rawson, E. S., Venezia, A. C., & Jaques, B. T. (2018). Creatine supplementation and lower limb strength performance: A systematic review and meta-analyses. *Sports Medicine*, 48(6), 1355–1363. <https://doi.org/10.1007/s40279-018-0894-5>

McMorris, T., Mielcarz, G., Harris, R. C., Swain, J. P., & Howard, A. (2007). Creatine supplementation and cognitive performance in elderly individuals. *Psychopharmacology*, 195, 661–669. <https://doi.org/10.1007/s00213-007-0936-8>

Benjamin Youmans, Fitness Specialist

The Murph Challenge: A Memorial Day Tradition

As Memorial Day approaches, many of us look forward to participating in a revered tradition that combines fitness with remembrance—the Murph Challenge.

What is the Murph Challenge?

The MURPH is a challenging workout designed to honor the life and heroic sacrifice of Medal of Honor recipient, Navy SEAL Lt. Michael P. Murphy., who died in Afghanistan on June 28th, 2005. The MURPH is traditionally performed on Memorial Day to honor fallen servicemen and women. For the full effect, a 20-lb vest is worn for the duration of the challenge which consists of the following five core components.

- 1 mile run
- 100 pull-ups
- 200 push-ups
- 300 air squats
- 1 mile run



While these amounts of reps may seem daunting, the basic components are very modular and adaptable to almost any level of fitness or individual.

Are you an experienced runner or crossfitter? Try the full MURPH.

Are you more casual? Try a half MURPH.

Are you interested in starting a fitness journey? Try a quarter MURPH.

Running can be substituted with walking, push-ups can be done on the knees, pull-ups can be negative reps (jumping up and slowing your descent, essentially the second half of a rep), and you can use a chair or box as a guide for squats. Remember to train safely and stay hydrated, especially if you plan on partaking in the challenge outdoors. If you have any questions or want some advice, please stop by the Fitness Center and ask any of the Trainers, we’d all be more than happy to help.

Don’t let the full challenge intimidate you from attempting what you can. Remember that everyone started somewhere and just doing your best is all anyone can ever do. So, get out there this Memorial Day, honor those that gave it all, and try the MURPH Challenge.

Picture Description: Image shows the 2024 Murch Challenge official logo.

Additional Reading:

CrossFit. (n.d.). *Murph Hero Workout*. Retrieved from <https://www.crossfit.com/heroes/murph-workout>

GORUCK. (n.d.). *Tips for Taking On The “MURPH”*. Retrieved from <https://blog.goruck.com/rucking-training/tips-for-taking-on-the-murph/>

Easter, M. (2021, May 6). *How Murph Became the Most Legendary Fitness Challenge Ever*. Men's Health. Retrieved from <https://www.menshealth.com/fitness/a36163839/murph-workout-crossfit-challenge/>

Two Percent. (n.d.). *How Memorial Day Murph Became the World's Most Famous Workout*. Retrieved from <https://www.twopct.com/p/how-memorial-day-murph-became-the>

Juneteenth Closure Notice

2025 NASA Moves! Fitness Challenge Information

In recognition of Juneteenth National Independence Day, the KSC Fitness Center will be closed on Thursday, June 19, 2025.

We invite you to use this time to reflect, learn, and rest. Regular hours will resume on Friday, June 20.

Picture Description: A bold graphic commemorates Juneteenth, also known as Freedom Day, celebrated on June 19, with vibrant red, green, and yellow colors symbolizing liberation and African American heritage.



Elevate Your Fitness with Group Exercise!



Picture Description: A diverse group of four fit individuals sits on a gym floor, engaging in a post-workout high-five and sharing smiles. The industrial-style gym setting features large windows and a relaxed atmosphere.

Looking to add energy and variety to your workouts? Our **Group Exercise Classes** are designed to help you build strength, improve flexibility, and boost endurance—all in a supportive, community-driven environment.

Why Join a Class?

- ✓ **Stay Motivated** – Energizing workouts led by expert instructors
- ✓ **Build Community** – Exercise alongside fellow KSC employees
- ✓ **All Levels Welcome** – Modifications provided for every fitness level

Class Lineup

- **Build & Balance:** A strength-based class using body weight and optional weights for a total-body experience.
- **Stretch:** Improve flexibility, balance, and mobility through guided poses and movements.
- **Circuit Training:** A fast-paced, high-energy workout combining **strength, endurance, and cardio**.
- **Yoga Flex:** Flow through a series of yoga-inspired movements to enhance balance and relaxation.

New to Group Fitness?

No worries! Every class is beginner-friendly, and our instructors will guide you every step of the way. **Bring a coworker or friend** and make your workouts even more fun!

Find Your Class!

Visit the [Group Exercise Schedule](#) to explore class times, instructor details, and descriptions. This resource is updated regularly so you never miss a workout opportunity.

Let's **move together, get stronger, and make fitness fun!** See you in class!

July 4th Holiday Closure

The KSC Fitness Center will be closed on Friday, July 4, 2025, in observance of **Independence Day**.

Since our next newsletter will arrive after the holiday, we wanted to give you advanced notice. Stay safe and active over the long weekend!

Picture Description: A child runs joyfully through a grassy field at sunset, holding an American flag that flows behind them, symbolizing freedom, patriotism, and youthful spirit.



Ashley Cowart, Wellness Specialist

Service Before Self: Redefining Resilience and Wellness at Work

When Rest Isn’t Restful—You’re Not Alone

Before I ever heard the phrase “service before self,” I saw it lived out daily by the people who raised me. I grew up in a working-class home with two twenty-something parents who taught me, by example, that people take care of people.

My mom worked as a waitress during my early years, spent time as a 911 dispatcher, and took classes to earn her degree in office systems technology—eventually building a career that led her to serve others as a Wellness Coordinator in a senior living facility.

My dad, a lifelong mechanic, worked long hours—often 10-hour shifts at his regular job—only to come home and spend his weekends fixing cars for friends, family, and neighbors, usually charging no more than the cost of parts. Even now, working for Northrup Grumman, you can still find him on the weekends tinkering away on some project at the house—whether it’s his own or for someone else.

They did all of this while raising three young kids in the ’90s on a shoestring budget. Together, they showed me that hard work, reliability, and compassion weren’t optional—they were simply what you did. Sometimes, you put others before yourself because it’s the right thing to do.



I carried that value into every job I’ve ever had—whether it was guiding kayak tours on the Indian River Lagoon, supporting patients as a physical therapy aide, or helping participants navigate ropes courses and team-building challenges as a challenge course facilitator. That drive and desire to help others brought me to the fitness industry, and later, to my current role serving the NASA KSC workforce. I’ve always worked hard and pushed forward, often juggling multiple jobs to make ends meet. And for a long time, that sense of duty served me well.

But somewhere along the way, I **have** started treating my own well-being like an afterthought. My default setting **has become** to show up and do as much as I can, all the time. I didn’t realize it at first, but I’ve been slowly burning out—so focused on holding space for others that I haven’t left any for myself. And I know I’m not alone. Many of you reading this probably understand what it feels like to be needed so much that you forget your own needs.

If you’ve ever received an email from me, you’ve likely seen how I often sign off: **“In your service.”** It’s more than a tagline—it’s a reflection of how I move through the world. But lately, I’ve learned that serving others can’t come at the cost of abandoning yourself. **True service** must start from a place of wholeness, not depletion. I’m quite literally putting myself under the microscope here to drive that point home.

Picture Description: Me, as a high school graduate in a maroon cap and gown, receiving a kiss on each cheek from my parents, capturing a heartfelt moment of support and achievement.

Compassion Fatigue: When Your Superpower Needs Recharging

Compassion may be your superpower, but even superpowers have limits.

In any mission-driven, service-based, or high-demand profession—whether you're in engineering, research, fire services, security, HR, or a caregiving role—there’s often a hidden expectation that you’ll keep showing up for others, no matter the personal cost. You’re expected to be composed, empathetic, adaptable, and high performing, all while staying emotionally grounded. But behind that polished professionalism, many of us are quietly running on empty.

This invisible output is known as **emotional labor**, the internal effort it takes to appear calm, supportive, and productive even when you're overwhelmed. It doesn’t show up on your calendar or time sheet, but it drains your energy all the same.

When left unchecked, it can evolve into **compassion fatigue**—a form of burnout rooted in prolonged empathy, emotional exposure, and overextension. And while it’s often associated with healthcare, the signs are just as relevant across the KSC workforce:



- You’re emotionally numb by the end of the day—even if nothing “bad” happened.
- You dread tasks that once felt purposeful.
- You internalize others’ stress or feel overly responsible for their outcomes.
- Your wellness routines (movement, sleep, nutrition) fall to the back burner.
- You’re constantly in “go mode,” even outside of work hours.

This isn’t failure. It’s fatigue. And it's more common than you think.

Picture Description: A tired office worker leans on his desk with fake open eyes drawn on sticky notes covering his closed eyes, humorously depicting exhaustion during late hours at work.

When Rest Isn’t Restful: Navigating the Burnout Loop

Ever feel too tired to make plans, but too restless to sit still? You skip the invite, stay home to “rest,” and somehow end up feeling worse. You’re not alone—and there’s a name for this kind of stuck: **emotional burnout**.

The burnout loop looks like this:

- You’re exhausted, so you opt out of plans.
- You stay home but feel guilty, bored, or disconnected.
- You burn energy debating what to do or how to rest “correctly.”
- You end up doing nothing restorative.
- You still feel tired **the next day**.



This isn’t laziness. It’s your nervous system on overload. And many high-functioning professionals (especially those with Type A tendencies [hi, that’s me])—live here more often than we’d like to admit. My purpose for writing this is because I struggle with this daily. As a highly motivated Type A personality, it is very hard for me to not do extra, not give 110%, or not take on one more task.

Picture Description: A young man in a green hoodie lies on a leather couch holding a TV remote, staring blankly ahead with a tired expression, capturing a mood of boredom, fatigue, or emotional withdrawal.

Practical Reset Tools for the Burnout Loop

Sometimes, the best strategy is not a full day off or a week of vacation, it’s one small moment of intentional reset. Here are some science-backed strategies **that I have begun to implement in my own life, that you can also try**:

- **Micro-Goals:** Pick a 10- to 20-minute task (fold laundry, walk the block, water plants) to activate your brain and break the mental freeze.
- **Low-Stakes Stimulation:** Choose something comforting but slightly engaging—like a coloring book, a light puzzle, or a favorite feel-good show.
- **Body-Mind Cues:** A warm shower, changing clothes, or switching seats can help signal a shift in energy.
- **Create a “Low-Energy Menu”:** Make a short list of 3–5 go-to activities you can do when you’re too tired to think clearly but still want to feel better.



Picture Description: A smiling woman enjoys a creative moment, sketching or coloring with colored pencils at a sunlit table, reflecting relaxation, mindfulness, and personal expression.

Redefining What Wellness Really Means

We talk about wellness in physical terms all the time—but true wellness is multifaceted. It’s physical, yes, but it’s also mental, emotional, and spiritual. It’s boundaries. It’s recovery. It’s letting go of the idea that you can only rest when you’ve “earned it.”

This is especially important during **Mental Health Awareness Month (May)** and **National Work-Life Balance Week (June 24–28)**—two timely reminders that burnout isn’t just about working too many hours. It’s also about giving too much of yourself, without making time to refill your tank.

Let’s Keep the Conversation Going

This article is a reflection of my personal journey—through overcommitment, burnout, and the difficult lessons that I am currently learning and working through on the importance of self-compassion. But it’s also a conversation starter.

If any part of this resonated with you, I invite you to take it one step further. I have a workshop titled: **“Burnout Factor: Identifying & Managing Exhaustion.”** This workshop dives into the signs and symptoms of burnout, both physically and mentally. Attendees will learn practical strategies to manage stress, improve recovery, and restore energy levels through lifestyle changes and mindfulness techniques. It’s perfect for teams, leaders, or anyone feeling stuck in the burnout cycle. Workshops are available by request—just email me at ashley.n.cowart@nasa.gov to learn more or schedule a session for your group.

Remember: Being selfless doesn’t mean being depleted. You can serve others best when you’re not sacrificing yourself in the process. **Let’s normalize the pause. Let’s reimagine what resilience looks like. Let’s take care of each other—and ourselves.**

References

American Psychological Association. (2021). *Stress in America 2021: Pandemic continues to take a toll on mental health*. <https://www.apa.org/news/press/releases/stress/2021/one-year-pandemic-stress>

Deligkaris, P., Panagopoulou, E., Montgomery, A. J., & Masoura, E. (2014). *Job burnout and cognitive functioning: A systematic review*. *Work & Stress*, 28(2), 107–123. https://www.researchgate.net/publication/262008721_Job_burnout_and_cognitive_functioning_A_systematic_review

Grandey, A. A., Diefendorff, J. M., & Rupp, D. E. (Eds.). (2013). *Emotional labor in the 21st century: Diverse perspectives on emotion regulation at work*. Routledge.

Hallowell, E. M. (2022). *Overloaded circuits: Why smart people underperform*. *Harvard Business Review*. <https://hbr.org/2005/01/overloaded-circuits-why-smart-people-underperform>

Maslach, C., & Leiter, M. P. (2016). *Understanding the burnout experience: Recent research and its implications for psychiatry*. *World Psychiatry*, 15(2), 103–111. <https://pmc.ncbi.nlm.nih.gov/articles/PMC4911781/>

Melamed, S., Shirom, A., Toker, S., Berliner, S., & Shapira, I. (2006). *Burnout and risk of cardiovascular disease: Evidence, possible causal paths, and promising research directions*. *Psychological Bulletin*, 132(3), 327–353. <https://doi.org/10.1037/0033-2909.132.3.327>

National Institute for Occupational Safety and Health. (2018). *Stress at work*. Centers for Disease Control and Prevention. <https://www.cdc.gov/niosh/docs/99-101/>

Pines, A. M., & Keinan, G. (2005). *Stress and burnout: The significant difference*. *Personality and Individual Differences*, 39(3), 625–635. <https://doi.org/10.1016/j.paid.2005.02.009>

Schulte, B. (2014). *Overwhelmed: Work, love, and play when no one has the time*. Sarah Crichton Books.